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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,505	02/24/2004	Aditi Banerjee	TI-25464.1	9903
23494	7590	11/19/2004	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			KESHAVAN, BELUR V	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/785,505

Applicant(s)

BANERJEE ET AL.

Examiner

Belur V Keshavan

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Minutes Of The Interview

A telephone interview was held on November 15, 2004 with applicants' attorney Mr. Carlton H. Hoel when the status of claims 2 and 3 in the application was discussed. It was agreed to renumber claims 4 and 5 as claims 2 and 3 respectively as the claims 2 and 3 did not exist in the application, as per (37 CFR 1.126).

Remarks

The claims 4 and 5 in the preliminary amendments are re-numbered as 2 and 3 respectively.

Claims 1, 2 and 3 are in the application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1, 2 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Crenshaw et al. (US Patent No. 6,638,818).

Regarding claims 1, 2 and 3 Crenshaw et al. teach in figure 5 and in column 4 a capacitor comprising:

A first electrode including a surface of HSG (rugged polysilicon) (30) with a thickness of less than 30nm (column 4, lines 15-16); the first electrode has the shape of a cylinder portion plus a bottom portion with the surface of rugged polysilicon on both inside and outside of the cylinder portion (figure 5); a dielectric of oxidized silicon nitride (32) (column 4, lines 23-27); and a second electrode (34) on the dielectric (34)(column 4, lines (23-24).

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Closing

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

M. Ino et al. (J. Vac. Sci. Technol. B 142(2), Mar/Apr 1996 pp 751-756), is cited to show deposition of rugged surface polycrystalline silicon film and its application in a stacked DRAM capacitor electrode.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Belur V Keshavan whose telephone number is 571-272-1894. The examiner can normally be reached on 8-4:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BVK.
November 2, 2004.

Belur V. Keshavan.
Examiner. Art Unit 2825.

Matthew Smith

**MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800**